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GOSSELIN'S CLINICAL LECTURES ON SURGERY . . . 16 PAGES.

CLINICS.

CLINICAL LECTURES.

Clinical Lecture on the Reduction of Strangulated Hernia. Delivered at St. George's Hospital, by TIMOTHY HOLMES, F.R.C.S., Surgeon to, and Lecturer on Surgery at St. George's Hospital.

We have had two cases of strangulated hernia in this hospital within the last week, one of which was reduced without an operation, and the other by extra-peritoneal operation. I propose to-day to speak to you first of the causes of difficulty in reduction, and then of the ways in use for facilitating it.

The main causes of difficulty in reduction are, first, the sudden forcing out of a coil of bowel through a small ring, the bowel afterwards becoming inflated by secretion of gas and fluid. The same may happen with omentum, which becomes congested with blood and thickened by extravasation, and so swollen. Many herniæ are thus strangulated which, though of the congenital form, occur non-congenitally, and many non-congenital herniæ of sudden formation. The next cause of the difficulty in reduction is some irritable condition or spasm of the muscles connected with the hernial aperture. Then we have changes in the contents of the tumour from secretion into the bowel, or from accidental malposition or implication of the contents with each other. These are cases in which reduction is exceedingly difficult, and in many cases is entirely impossible, unless the sac be opened

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Other herniæ become irreducible in consequence of irritation or swelling, or commencing inflammation, or actual inflammatory change and matting together of the tissues which either form the ring or the neck of the sac, or both of them. Here is a beautiful specimen in which the hernia was reduced *en masse*, and in which the patient in consequence died with the strangulation still unrelieved, and you may see quite distinctly that the strangulation is in the sac itself. In a case of that kind reduction by operation would obviously have been utterly impossible except by opening the sac. Then, again, there are cases in which the hernia is, in all probability, entirely irreducible, in consequence of chronic changes in the omentum which forms the hernia. This has, perhaps, been in the sac for years, and the patient has either worn no truss at all, or, what is still more likely, and still more unfortunate, he has worn an ill-fitting truss upon the projecting hernia, and in that way has irritated it, and has caused it to become enlarged and thickened, and so irreducible. Here, again, is a hernia in which the contents of the sac are irreducible in consequence of adhesions which have formed between the omentum and sac. The sac and hernial contents have formed an organic connection, and nothing except the division of these bands of organized adhesions can by any possibility enable you to reduce the hernia. And here, too, is another case of a still more formidable nature, which I remember occurred in my practice when assistant surgeon here—a case of enormous inguinal hernia which had been for many years irreducible; a portion became strangulated, and very difficult indeed it was to see which portion it was in which the strangulation existed. But you see a number of coils of intestine all adherent to each other, and to the sac, so that no dissection which it was justifiable to undertake would have enabled one to reduce the intestine into the belly. These preparations and observations illustrate to you the main causes of irreducibility in strangulated hernia. You must remember that irreducibility and strangulation are different, but I am not going into that subject now. I am speaking of cases in which the hernia is both strangulated and irreducible, and the obstacles to reduction are mainly those which I have pointed out.

Now, with respect to the methods by which surgeons endeavour to meet these obstacles. The taxis is of course the thing first employed. I will not go into the question of position—of turning patients on their head, etc. All this seems to me to depend upon an entire, I will not say ignorance, because that would be rude, but an entire forgetfulness of the obstacles which there are to reduction. Gravity is no serious obstacle to reduction. I do not think putting a man on his head makes his hernia a bit more reducible than putting him on his heels. It does not appear to me that you get any advantage by raising the feet, still less by raising the whole body up altogether so that the man stands on his head: because though you certainly may get some slight advantage from the traction of the bowels which are inside the belly pulling down the bowel outside it, yet you lose a great deal more from the spasmodic condition into which you throw the muscles of the lower extremity and the abdominal wall. It seems to me an entire mistake to waste time upon any of these things. The taxis is the plan which you have first to employ, and that of course aims at neutralizing the first of the obstacles that I mentioned. When the bowel or the omentum has been suddenly protruded through the ring as I have said, the first effect of strangulation upon it is to cause a great increase of bulk by the secretion of air and fluid into the bowel, by the secretion of exuded matters into the tissue of the omentum, and by the detention of blood in both of them. Your object is by gentle pressure to empty the bowel of air and fluid, to empty the vessels of blood, and to push back some of the contents of the hernial tumour through the ring; and the first thing that enables you to be certain that you will succeed in that, is feeling a little air or fluid gurgling back into the cavity of the abdomen. You saw a case a few days ago of a young man who had had inguinal hernia some time, and had not

taken much notice of it, till on some violent exertion the inguinal hernia protruded, and at once became acutely strangulated. He was brought in here in great pain. A good deal of vomiting had taken place before admission, and in fact things looked rather bad. There was a very tense tumour, without any impulse on coughing, but we succeeded quite easily in reducing it; by putting the man under chloroform and making gentle pressure, in the course of two or three minutes it went up. And I knew it would go up as soon as I began to handle it, by feeling a little air gurgling out of the hernial tumour into the abdominal cavity. In a case of that kind it would not have been justifiable, if I had failed to reduce it, instantly to have gone on to operation. It seemed to me the strangulation, although acute, was so recent and the symptoms altogether so incipient, that I determined, if I failed in reducing it, to have put him into the warm bath, and to have waited, at any rate, a good many hours, and to have made renewed attempts at taxis, before proceeding to operation. Taxis is very much assisted by chloroform, and I think much more assisted by chloroform than by ether. I do not myself recognize that very great difference in the danger of anæsthesia from chloroform and from ether which some surgeons profess to feel. It seems to me that complete surgical anæsthesia is always a dangerous thing, whether produced by chloroform or ether; and I think chloroform produces so much more complete relaxation, and that so much more speedily, that it is very much more convenient in the reduction of dislocations and strangulated hernia.

But although our horror of repeated manipulation in attempting taxis may have been a little exaggerated by cases which we have seen of severe injury to the intestine by the taxis—cases which I would venture to hope are somewhat exceptional—at the same time I do not think that too prolonged or too frequently repeated efforts at taxis are desirable. I think that Professor Gross, of Philadelphia, has erred somewhat on the other side in stating that almost all herniæ may be reduced by repeated manipulations. It seems to me that when vomiting is distinctly declared, and has turned from bilious vomiting into vomit mixed with the contents of the small intestine—what is sometimes called fecal, although it is not fecal, but where the vomit has turned from the green colour of bilious vomiting to the dirty brown of the contents of the small intestine—then you had better not wait any longer; if you cannot by a renewed attempt at taxis reduce the hernia, you must operate. But that is an interval which allows you a considerable amount of time. You do not, usually speaking, get that condition of things until after twenty-four hours of strangulation, and if you have the patient under your care during the whole of that time there is no reason why you should not put him once, if not twice, under the influence of chloroform, and attempt taxis. Besides, you should put him into a warm bath for a considerable time, or apply fomentations for several hours before you begin to think of the *ultima ratio* of an operation. Ice is frequently used, but seems to me to be very seldom of any use, except in those cases of inguinal hernia in which the tumour is voluminous and evidently contains hardly anything except intestine, and that very much distended with air. In these cases you will find the application of ice of considerable utility.

There is another method that has been proposed for the reduction of hernia, and that is by the aspirator. Dr. Dieulafoy spoke of the aspirator at first as being almost free from danger in these cases; but that certainly seems not to be the case. The object of the aspirator is to empty the bowel, or sometimes you do not perhaps puncture the bowel, but merely empty the sac; more generally you puncture the intestine, and draw off a good deal of gas and a certain quantity of fecal fluid. The puncture in the intestine will be but small. It will be immediately closed by the slipping upon each other of the three coats of the intestine, so that when the aspirator is withdrawn the intestine will no longer have a hole in it. The three holes in the three coats will not correspond, and you can very frequently reduce the hernia afterwards. It has ap-

peared to us at this hospital to be a method which is dangerous, and so doubtful that we have not as yet ventured upon using it; but at the same time it has been used elsewhere in many cases, and its use would be most indicated in the case of a voluminous hernia in which ice is used. So much for the ordinary methods of reduction which precede the application of the knife.

The warm bath has been lately disused at this institution; at least I think I am right in saying so. I certainly have not used it for some years. Sir James Paget, however, recommends it to be used "in all cases that are not very bad;" that is to say (as I think he explains in another passage) in all cases in which you do not think the operation is absolutely indispensable at that moment, and in many of these cases you would not use taxis at all. In many cases in which you think the case is so bad that an operation cannot be put off even a few minutes, you would also think the matter had gone on so far that you had better not handle the gut in any way. The best way is to cut down into the sac at once and investigate the condition of things. It certainly appears to me that Sir James Paget is right in that respect, that in most of these instances you wait a few hours, and if you wait a few hours I cannot help thinking the patients sometimes are a good deal relieved; the muscular spasm is considerably relaxed, and the hernia made very much more reducible by the old method of applying a warm bath, and I must say I rather regret it has so much gone out of fashion at this hospital. I will try at any rate in my own practice to bring it in again. Our plan when I was a student used always to be to put the patient into a hot bath, make him entirely faint, and then try to reduce the hernia. Sir James Paget directs you to use the bath only moderately warm instead of hot. I confess the old plan still seems to me the best. One knows the extreme relief that the hot bath pushed to faintness gives in cases of descent of a stone from the kidney, and also in the case of a gall-stone; and we have often seen the same relief in cases of strangulated hernia.

Now I come to the main point, about operations with or without opening the sac. The case I have to direct your attention to to-day is that of a woman, æt. 50, a laundress, who was admitted with a strangulated femoral hernia on the evening of the 6th June. She was very well nourished, and had never had anything serious the matter with her before. Three years ago, while working hard at her occupation, she felt a sudden pain and found a hard swelling in the right groin. She kept her bed two or three days, and the swelling disappeared, and she thought no more about it. On the evening of the 5th of this month she went out for a long walk, over-exerted herself, came home, went to bed, and found a swelling again in the right groin. She began to have frequent attacks of vomiting, and was admitted into the hospital. I was sent for, but by accident I did not receive the message, and did not see her till the following morning. She had had frequent attacks of vomiting; the substance vomited was of a dark green colour, at first solid, that is to say mixed with food, but afterwards much more watery, showing the commencement of copious secretion from the bowel. On seeing her, and failing to reduce the hernia under anæsthesia, it was obvious that the best thing was to operate without further delay. On cutting down on the sac I found I could pass a director underneath Gimbernat's ligament with great ease, and thought I would try the effect of Petit's operation, which consists in dividing the parts external to the sac, where you can find them most tense. This part in a femoral hernia will be pretty sure to be Gimbernat's ligament, the deep crural arch, and the upper cornu of the falciform opening, which three structures meet together at the upper aspect of the femoral ring. When you can find a tight band lying outside the sac in that situation, an incision will liberate those three great ligamentous structures, and you can then sometimes succeed in reducing the hernia. That was the case in this instance. On making an incision and passing up the finger so as to see that the ring had been entirely free from constriction outside the hernial sac, the tension

disappeared, and very slight manipulation succeeded in putting the bowel back. That was on the 7th. The patient had no symptoms at all except slight vomiting after the operation, due merely to the influence of the ether. She had a tolerably good night. There was a little retention of urine, which is so common in women after operations for hernia. A little suppuration occurred in the small wound made, but that was of no importance whatever, and on the 11th, as she was suffering from a good deal of distress from constipation and foul tongue, I gave her a slight aperient, three grains of calomel, followed by a common injection. The bowels operated immediately, and she has since been perfectly well. The wound is beginning to heal rapidly, and she may be pronounced to be out of danger.

That is a very simple example of the extra-peritoneal operation. It is an operation you do not often see here, and I think a somewhat erroneous view, but a view that I cannot say is very erroneous prevails as to our treatment in this hospital. It is said in many quarters that the extra-peritoneal operation is never performed here. That is not true, because I have a note here of seventeen cases in which it has been performed; but it is perfectly true that it is very rarely performed, and the rarity may be judged of in this way. Mr. Haward wrote a paper on this subject in the first volume of St. George's Hospital Reports (1866). I had written a paper some time previously, with Mr. Cooper, showing that out of 121 cases of strangulated hernia in four cases the operation without opening the sac had been performed, and I see all four cases were under Mr. Cutler's care, and all recovered. When Mr. Haward wrote, the number had risen up to 181 cases, and the number of cases without opening the sac only up to six. Again, I wrote a paper in the second volume of the Hospital Reports based upon the notes of 200 cases of operation and then as many as fourteen had been operated upon without opening the sac. And now, when we have had about 374 cases of strangulated hernia, I find seventeen have been operated upon without opening the sac. You see, then, that the operation is rarely practised in this institution, and I must say I do not quite understand why this is so, except from the tendency to routine; for our experience in this operation has been remarkably successful, if you compare it with the ordinary experience of strangulated hernia. Of these seventeen cases of hernia, one was umbilical, and strangulated umbilical hernia is a peculiarly fatal form. That one case died. The cause of death was supposed to be peritonitis, though I believe no opportunity was afforded for post-mortem examination. Of the other sixteen cases only two died. One, which was a case of inguinal hernia, under Mr. Henry Lee's care many years ago, died of suppuration in the scrotum and I think erysipelas, that is to say of one of the ordinary complications of wounds and of nothing specially connected with hernia. The other case, also under Mr. Henry Lee's care, a case of double femoral hernia, died from peritonitis, verified by post-mortem examination. Those are roughly the heads of our statistics of operations for strangulated hernia without opening the sac. There are very few of them, only seventeen, and I think one might exclude the case of umbilical hernia, because umbilical stands on quite a different footing from femoral and inguinal hernia; and if you do so, you see that of sixteen cases of inguinal and femoral hernia operated upon, only two died. That is very different from the statistics of ordinary operations for strangulated hernia, for from 1852 to 1877, 357 cases have been operated upon, in which the sac was opened; and of these 218 recovered, and 139 died. Whilst our operations without opening the sac have given only one death out of eight, in the others the deaths have been more than one-half of the recoveries. I do not say that is a fair comparison, and none of these statistical comparisons are fair, because they omit to take into consideration that which is the essence of the whole thing, namely, what were the circumstances of the case. Of course, these sixteen cases I have been speaking to you about, in which the sac was not opened, were the most promising cases, and in most of them recovery might

have been anticipated from the beginning. They were cases in which the symptoms were not very acute; there was really no very great hurry about the matter, and many people would have said it was doubtful whether, after all, the hernia could not have been reduced by taxis. At any rate, they were the most favourable specimens, whereas all the unfavourable specimens go into the other category. You will find the same objections might be made to all statistics which are not based upon notes of cases, for surgical statistics not based upon notes of cases are absolutely worthless if you intend to found any definite practical conclusions upon them. That was the vice which was so patent in the statistics on which Sir James Simpson ventured to found a charge of general unhealthiness against all London hospitals, a charge which was absolutely untrue; it was founded upon nothing except a mass of figures not supported by notes of cases, and figures under such circumstances seem to me merely misleading.

In order to settle what the value of this operation without opening the sac would be, you would want a long series of cases of hernia of about similar gravity—fifty on either side might be sufficient. Say you had fifty cases in which the strangulation had not lasted over forty-eight hours, all treated by the extra-peritoneal operation, and you had to compare them with another series of the same gravity, treated by the intra-peritoneal operation; if you could see that the mortality after the intra-peritoneal operation was not greater than the mortality after the extra-peritoneal operation, say they were both one in eight, then I should say you had succeeded in showing that there was no importance whatever in the matter, that whether you opened the peritoneum or not was of no importance, and every surgeon would say, "It is safer to open the peritoneum and look at the bowel." But that has never been done yet, and until it has been done this matter will not be settled. If you read Mr. Haward's paper, which is a most interesting one, and which is by far the most able argument I know of in favour of the course pursued in this hospital, you will see what advantage he attributes to the operation of opening the sac. He says, "The foregoing remarks demonstrate, I think, that the advantages of the operation in which the sac is opened are certainly greater than those which pertain to that in which that structure is not incised." He argues frankly in favour of opening the sac in all cases, attributing to the intra-peritoneal operation the following definite advantages: "1. That the condition of the intestine can be accurately determined, and that therefore there is less danger of returning a gangrenous intestine; 2. That it insures the detection of constriction of the bowel by adhesions, omentum, or thickening of the sac; 3. That the fluid in the sac escapes externally, instead of being pressed into the abdomen; 4. That there is less danger of wounding the intestine; and, lastly, that it is less fatal." Those are the conclusions to which he comes with respect to operations by opening the sac as compared to the operation without opening the sac; but I confess it does not seem to me, with all possible respect for Mr. Haward, and fully allowing, as I do allow, that our operations by opening the sac are as good in their results as those of other institutions, from which a long series of extra-peritoneal operations have been published, it does not seem to me to settle the question; it does not seem to me you can settle the question till you have got the notes of cases compared as I have suggested, that is to say, similar cases treated differently. You could then see whether in each series composed of similar cases the mortality would be greater or less; and I undertake to say that the mortality of the extra-peritoneal series would be less. At least I am very strongly impressed in the cases which I have seen with the simplicity of the extra-peritoneal operation, and the utter absence of complications of all kinds; so that I cannot help thinking it must be less dangerous in cases to which it is suitable, and if I had the task imposed upon me of answering this paper of Mr. Haward I should say in the first instance, that it is true that the condition of the intestine can be more accurately deter-

mined by opening the sac; but that you ought never to employ the extra-peritoneal operation in any case in which there is the slightest reason to suspect gangrene or ulceration of the bowel. If the strangulation has lasted long enough to justify you in thinking about gangrene, you ought never to perform Petit's operation. The second consideration urged by Mr. Haward—viz., that the surgeon is able by opening the sac to detect constriction of the bowel by adhesions, by omentum, or thickening of the sac, is also true; but it is equally true that you cannot reduce the hernia when it is in that condition without incising the sac, at least you cannot reduce it without an amount of violent pressure which is altogether wrong. If you look at the lecture of Sir James Paget on this subject in his recently published Clinical Lectures, you will see there some very good observations upon the fact that if you find any difficulty in reducing the bowel without opening the sac, you ought not to persevere in the attempt too long; if you do, you will in all probability set up a good deal of suppuration and inflammation around the sac, as well as do other and graver mischief. I believe it has been known that the bowel has been ruptured in these cases. The second observation of Mr. Haward, then, is perfectly true; but it may be met by saying that you ought not to insist upon the operation with so much violence as to run any risk in your attempts at reduction. Then, as to Mr. Haward's third argument, that the fluid in the sac escapes externally instead of being pressed into the abdomen. Since Mr. Haward started the idea, it has been made use of as a main argument in favour of the operation by opening the sac. It is said you let out all the foul fluid that is in the hernial sac, whereas, if you operate without opening the sac, you reduce that along with the other contents of the sac into the peritoneal cavity, at the risk of setting up peritonitis. I confess that I can hardly bring myself to believe in the danger of pressing back the fluid in the hernial sac, because I have seen a great number of cases in which the hernia has been reduced by taxis after a length of constriction quite as great as that in which the extra-peritoneal operation has been used, and in these cases no peritonitis took place. Peritonitis hardly ever takes place after the reduction of hernia by taxis; it does sometimes, but very rarely. I have noted one case in the Hospital Reports, and I think it is the only one I ever saw in which, after the successful reduction by taxis of a hernial tumour, peritonitis set in and proved fatal. The rarity of such cases proves that there is seldom little danger in reducing the fluid along with the bowel. After all, the fluid is but the secretion of the bowel; and if there is no danger in reducing the bowel, why should there be any danger in reducing the fluid. It will be soon absorbed. It does not seem to me that this idea is supported by experience. Then, Mr. Haward says that there is less danger of wounding the intestine, and that is also the conclusion of Mr. Hancock; but I cannot think that there is much danger of wounding an intestine in operating outside the peritoneal cavity. There ought to be really more danger in operating inside the cavity. A little care will usually succeed in keeping the bowel and everything else entirely out of the way, and, as a fact, wound of the bowel is very rare in any form of operation.

Then, to say that the intra-peritoneal operation is less fatal seems to me to be just what you want to prove. It is not proved, I think, by the statistics that Mr. Haward produces. As those statistics are my own, I am bound to speak of them with a certain amount of respect; but they only show, that in a long series of cases mixed up altogether, the percentages were about the same—about thirty per cent. in one case, and thirty-three in the other. That does not show to me that one operation is less fatal than the other; it only shows that there is no very great difference. It does not show anything accurately with respect to the treatment of given cases. I must say my own feeling is strong in favour of using this operation more freely than we have done; for we have been a little led away from the true point, which is not whether it would make any vast difference in the statistics of a long series of cases but whether it would

save a few lives. If you restrict Petit's operation to those cases of strangulated hernia in which the symptoms are less grave, in which the strangulation has lasted only a short space of time, and in which there is no reason to apprehend any serious mischief to the bowel, I rather think you would succeed in the course of some years in saving a few lives which might be lost by peritonitis following upon the opening of the hernial tumour. That is my own impression; but I only give it you for what it is worth, having no very extensive experience of the operation, and I would say, having been taught entirely the reverse doctrine. I shall therefore be disposed, in whatever opportunities happen to come before me, to employ Petit's operation more freely, and make it the rule than the exception, of course restricting it to the cases I have just mentioned. —*Med. Examiner*, July 26, 1877.

HOSPITAL NOTES AND GLEANINGS.

Tumour of the Lower Jaw removed without External Wound.—Ellen M., aged 33, was admitted into Mr. MAUNDER'S Ward, at the London Hospital, on June 4. About December last, the patient first noticed a small swelling of the gum, near the back teeth, on the right side of the lower jaw. She thought it was merely a gumboil; it was neither tender nor painful, and its colour was of a reddish tint. When the tumour had been growing for about two months, the patient sought advice of her doctor, who strangulated it with catgut, and a piece of the growth came away. This operation was performed a second time, and another piece removed. After this two decayed teeth were extracted. The skin opposite the seat of the tumour had been painted three times daily with tincture of iodine, which seemed to retard the growth. The mass was always hard, and the patient could even masticate portions of her food on this side. Occasionally it bled a little.

On admission, the right cheek of the patient bulged outwardly, and, on looking into the mouth, a reddish growth, the size of a large walnut, occupying the site of the molar teeth, was visible. It was painless, hard, and smooth, much resembling gum-tissue.

On June 6, the patient being under the influence of an anæsthetic, and conveniently placed in a dentist's chair, the mouth was held open with a gag. A knife with a rounded end, guided by the tip of the left forefinger, was made to divide the soft parts over the anterior margin of the ramus just about its junction with the base of the bone, and then the periosteum and muscular attachments on both sides were separated with a raspatory. The bone was next partially divided with a small saw, and the section was completed with cutting forceps. The second bicuspid tooth, displaced by the growth, was now extracted, and the body of the bone was cut perpendicularly at this spot by means of the saw and the forceps. After the knife had been passed along both sides of the fragment to divide the mucous membrane and other structures down to the bone, the raspatory and forefingers then completed the operation. Thus the tumour and fragment of bone, stripped of the periosteum, came away in one piece. The facial vessels were not divided, and the bleeding was unimportant, no artery requiring ligature.

Remarks.—Mr. Maunder said such was the usual history of a case of fibrous epulis. It was benign, but recurred unless the bone surface whence it grew was also removed. Further, the growth was generally pedunculated, but in this instance it was sessile. Seven years ago (March 9, 1870) he had, he said, demonstrated in that theatre the feasibility of removing, without external wound, large lateral portions of the lower jaw, the seat of tumour. The patient on that occasion was ten years of age, referred to him by Mr. Owen, of Leatherhead. From that child he had taken away an extent of bone comprised between the middle of the left ramus and the site of the right canine tooth. The second case similarly treated was sent up by Dr. Dove, of Pinner. Both patients have since been often seen in capital health, and he felt justified in stating "that the practice of our art will have one horror less for a patient, who can be assured that no unsightly

scar will disfigure his face." He need scarcely suggest that the face of the female should be most scrupulously saved from disfigurement. Neither was it necessary to point out the distinctive characters of the above operation as compared with that of a comparatively trivial kind for the extraction of a sequestrum already nearly accomplished by nature. Fifteen years ago he had seen the late Mr. John Adams remove the whole lower jaw in a state of necrosis; and three years ago he (Mr. Maunder) had taken away in one piece rather more than the body of this bone, necrosed. Both patients were getting new bone generated as a substitute for the original, at the date of operation.—*Lancet*, June 23, 1877.

MEDICAL NEWS.

DOMESTIC INTELLIGENCE.

The Climate of Southern California.—According to a correspondent of the *Boston Medical and Surgical Journal* (Sept. 13, 1877), Southern California, and particularly the Ojai Valley, offers to invalids the following advantages: 1, mildness of temperature; 2, equability of climate; 3, dryness of atmosphere; 4, sheltered situation; 5, freedom from malarious diseases; and 6, plenty to amuse and interest visitors.

Deaths from Chloroform.—In the *Cincinnati Medical News* for August Dr. S. P. Cutter, of Memphis, Tenn., gives the details of the death of Dr. Jourdan, who died while having an eye extirpated under the influence of chloroform.

The *Toledo Medical and Surgical Journal*, August, 1877, reports a death from chloroform in the Homœopathic Hospital of Toledo. The subject was a boy, aged 12, who was undergoing an operation for talipes.

American Dermatological Association.—The first annual meeting of this Society was held at Niagara Falls, September 4, 5, and 6. A number of unusually interesting papers were read and the following officers were elected for the ensuing year. President, James C. White, M.D., of Boston; Vice-Presidents, Drs. C. Heitzmann and L. Duncan Bulkley, of New York; Secretary, R. W. Taylor, M.D., of New York; Treasurer, Dr. J. E. Atkinson, of Baltimore.

The next meeting will be held at Saratoga on the last Tuesday of August.

Endowment of the Chair of Surgery in the University of Pennsylvania.—The widow of the late Dr. J. Rhea Barton, of Philadelphia, has endowed with fifty thousand dollars the chair of surgery in this institution. The professorship will hereafter bear the name of the distinguished surgeon to perpetuate whose memory this liberal gift was made.

Obituary Record.—Died at Ann Arbor, on August 6th, from phthisis, Abram Sager, M.D., late Professor of Obstetrics and Diseases of Women and Children in the Michigan University.

Dr. Sager was born at Bethlehem, New York, in 1810, pursued his medical studies at Albany and New Haven under Professor March and Ives, and graduated in 1835. In 1848 he was appointed to the Chair of Theory and Practice of Medicine in Michigan University, and in 1850 he was transferred to the Chair of Obstetrics. In 1875 he severed his connection with the University on account of the establishment by the regents of chairs for the treating of homœopathy in connection with the medical department of the University. In 1876, Dr. Sager was unanimously elected President of the Michigan State Medical Society—a compliment which was no doubt intended as an indorsement by the profession of his State of the high-minded and exemplary course which he pursued amid those troubles which culminated in the resignation of his professorship.

FOREIGN INTELLIGENCE.

Migraine.—In order to alleviate pain in the course of an attack of migraine, or to cut it short at the commencement, Delioux recommends the juice of a lemon to be squeezed into a cup of coffee without milk or sugar, and drunk off at a draught.—*Med. Times and Gaz.*, Aug. 25, 1877.

The Treatment of Sciatica.—Dr. Flemming gives, in the *Berlin. Klinische Wochenschrift*, the results of his experience of forty cases of sciatica by means of the sand-bath. The patient is placed in a kind of trough, and the affected limb is surrounded by sand, at a temperature of 100° Fahr. or more, for half an hour; after this, a warm-water bath is administered. Recovery is stated to take place, upon the average, after twenty-four sand-baths.—*Lancet*, Sept. 1, 1877.

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Effects of Pilocarpin —Dr. Popow (*St. Petersb. Méd. Woch.*, Aug. 4) reporting upon the results derived from the hypodermic injection of pilocarpin in men in health and suffering from fever, and if experiments upon animals made in Prof. Suschtschinsky's laboratory, comes to the following conclusions: 1. Pilocarpin produces the same effect as an infusion of the leaves of jaborandi; 2. An injection of from 0.01 to 0.02 gramme induces abundant sweating, without causing the unpleasant effects (giddiness, vomiting, cephalalgia) produced by jaborandi, and is, therefore, better suited for therapeutical employment; 3. The temperature diminishes without any prior exaltation, from one hour and a half to four hours, and reaches its minimum soon after the cessation of the sweating; 4. The increased excretion of saliva is observed alike in the healthy and the sick after doses of from 0.001 to 0.015 gramme. Sweating only occurs in such doses in the healthy—fever patients, *e. g.*, typhus, requiring 0.02 gramme; 5. The quickening of the heart's action produced by the pilocarpin continues a pretty long time after small doses, but when large ones are employed this is soon replaced by retardation; 6. On the direct introduction of pilocarpin into the veins a retardation of the heart's action takes place suddenly without any prior acceleration; 7. Doses not exceeding 0.03 gramme do not exert any particular effect on the alimentary canal; but large doses (0.05 to 0.10 gramme) induce purging or even bloody stools, with intestinal movements and the development of gases.—*Med. Times and Gaz.*, Aug. 25, 1877.

Morphia Injections in Puerperal Convulsions.—Dr. Dietrich relates (*St. Petersb. Med. Woch.*, July 28) two cases with a view of encouraging the more frequent resort to subcutaneous injection of morphia in puerperal convulsions. In these cases recovery rapidly followed the injection of a quarter or one sixth grain of the hydrochlorate, a repetition being required in one of these.—*Med. Times and Gaz.*, Aug. 25, 1877.

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Treatment of Chronic Pharyngeal Catarrh.—Some time ago M. Michel recommended the employment of the galvano-cautery for the treatment of chronic pharyngeal catarrh. The plan has been practised by Riessenfeld in fifty cases, in none of which, however, was there any follicular enlargement. The battery used was that constructed by Middeldorpf, to one electrode of which a knife-shaped instrument was attached, and a series of strokes were made over the tonsils and uvula, the number varying with the severity of the case. The patients bore the operation in all instances exceedingly well, the only inconvenience complained of being the odour of the burnt membrane. Care must always be taken that neither the electrodes nor the conducting wires come into contact with the side of the tongue, lest it should be burnt. The operation is sometimes followed by a little difficulty in swallowing, and the patient should always be directed to gargle the throat frequently for a day or two, and take only fluid nourishment. The eschar becomes detached in the course of four or five days, and the suppuration, if any, rarely lasts more than a week. In the slighter cases a single application of the cautery is sufficient, and even in the worst cases M. Michel has never found it requisite to apply it more than five times. —*Lancet*, Aug. 11, 1877.

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Electrolysis in Aneurism of the Arch of the Aorta.—In the *Bulletin de Thérapeutique* for July 15, M. Dujardin-Beaumetz, of the St. Antoine Hospital, relates the first instance in which electro-puncture has been employed for the cure of aneurism of the aorta in France. Bringing his report

down to July 10, he says that a certain amount of the blood in the tumour has become coagulated, but the layer of coagulum thus produced is of slight extent. He proposes repeating the applications at intervals of a month, under the somewhat sanguine expectation of producing the eventual complete coagulation of the tumour.—*Med. Times and Gaz.*, Sept. 1, 1877.

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Alcohol Dressings in Wounds of the Scalp.—Prof. Gosselin, in a recent clinical lecture (*Gaz. des Hôp.*, Aug. 2), called attention to a patient with an extensive contused superficial wound of the scalp, unaccompanied by detachment or denudation. He did so because it was an example of the rapid healing of such wounds which has been so frequently observed under dressing with pure alcohol, without the development of any diffused or erysipelatous inflammation. The rapid cicatrization that takes place is not the result of healing by the first intention, for the edges of the wound still remain a little apart, while the lips and bottom of the wound give issue to sanguinolent seropurulent secretion, in nowise resembling good pus. This secretion gradually ceases, and the wound becomes dry without ever having been covered with granulations. This instance is a good example of the cases which have for some time attracted Prof. Gosselin's attention, in which wounds are healed by this intermediate mechanism, which is neither immediate cicatrization, nor cicatrization after granulation and suppuration. This mode of cicatrization in wounds of the head especially occurs when these are dressed with pure alcohol; other modes of dressing requiring the formation of granulations for healing. Whatever this dressing may be with regard to other parts of the body, in wounds of the head it seems to be that which gives the patient the most protection from consecutive accidents, and leads to the quickest cicatrization. So treated these wounds have less tendency to inflammation and suppuration, are cured quickly, and are less often attended with erysipelas and phlegmonous inflammation.—*Med. Times and Gaz.*, Aug. 18, 1877.

Spina Bifida treated by the Elastic Ligature.—Dr. Baldassare relates (*Annali Universali*, May) the case of an infant, eight months old, upon whom he operated for spina bifida situated at the base of the sacrum. The peduncle of the tumour was four centimetres in length. The largest circumference of the tumour measured twenty-two centimetres, its length (including the pedicle) being eleven centimetres. Fluctuation and transparency indicated its contents, and these were not influenced by respiration and only slightly so by compression. The tumour became somewhat more tense in the erect posture. Compression was commenced on the pedicle by elastic ligature on November 30, and by the sixteenth day, the tumour being then in a grangrenous condition with the pedicle reduced to a centimetre in circumference, it was removed by the bistoury, leaving a small depressed space almost filled with granulations. On Jan. 7 the child was well and lively. A linear cicatrix occupied the place of the peduncle, and beneath this could be felt a resisting membrane occupying the place where the bone was defective.—*Med. Times and Gaz.*, Aug. 25, 1877.

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Thermo-Cautery in Lithotomy.—Thermo-cautery seems now to be the order of the day in Paris. At a recent meeting of the Société de Chirurgie (*Gaz. des Hôpitaux*, July 21), M. Verneuil stated that he had employed it in three cases of lithotomy with advantage. It is used, however, not for effecting the operation itself, but for the performance of its preparatory stage in order to discover the urethra more easily. Its employment, which is extremely easy, facilitates this very much, while it prevents urinary infiltration. Sometimes, however, a fistula persists for a long time, viz., for seven weeks in one of these cases, and three months in another. M. Anger observed that the track caused by the thermo-cautery is a very clean one, and greatly facilitates the penetration of the instruments into the bladder. The incision should be made by rapid strokes, which are to be followed by irrigation with cold water. In his case, although the wound did not cicatrize for

thirty days, no urine had escaped after the tenth or twelfth day. The *passage* of urine over the wound, it is true, is not dangerous, but under the ordinary mode of procedure the different planes of the perineum are retracted irregularly, and *stagnation* of urine taking place, infiltration, or at the least maceration, of the wound may occur.—*Med. Times and Gaz.*, July 28, 1877.

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Oiling the Urethra.—M. Desprès (*Gaz. des Hôp.*, Aug. 4) has employed, like all other surgeons, various substances for greasing instruments intended to be passed into the bladder, but has often found, in spite of every precaution, that very painful friction is produced. Although not a partisan for injecting the bladder prior to lithotrity, experience has taught him that greasing the patient is a far more effectual procedure than greasing the instruments. For this purpose he injects, by means of a glass syringe, without any catheter, from seventy to eighty grammes of oil, and thus renders the passage of the instruments far less painful, these passing into the bladder, so to say, by their own weight.—*Med. Times and Gaz.*, Aug. 25, 1877.

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A Ready Method of Clinically estimating Urea in Urine.—Dr. Emerson Reynolds describes a new form of apparatus for the estimation of urea in urine by means of alkaline hypobromite. In his opinion Liebig's method of estimating urea afforded the most accurate results when carefully carried out, but the process is troublesome, and, therefore, unsuited for rough clinical purposes. On the other hand, the hypobromite process (which is but an improved form of the hypochlorite treatment long ago proposed by Dr. Davy) is undoubtedly that which most rapidly affords the desired results, although the latter have no pretensions to a high degree of accuracy. When strongly alkaline hypobromite of sodium is added to urine, pure nitrogen is evolved; this gas is almost wholly derived from the urea, which is known to yield up its nitrogen by this treatment, hence the volume of gas given off approximately measures the urea contained in the given specimen of urine. Various forms of apparatus have been proposed for collecting and measuring the nitrogen, notably those of Russell and West, Blackly, and more recently of Simpson and O'Keeffe, but all these involve the use of specially graduated measuring and other vessels, which are both expensive and not easily obtained. The process which Dr. Reynolds has arranged affords the desired results very rapidly, while the only measuring apparatus required is a common two-drachm minim-measure, which every medical man is supposed to have, and the rest of the apparatus can be fitted up at a very small cost (about 1*s.* 8*d.*), with materials very easily procurable.—*British Med. Journal*, August 11, 1877.

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The Lessons of the London Smallpox Epidemic.—The only uses of such an epidemic of smallpox as that which has raged for the last twelve months are to accumulate fresh evidence of the deadliness of the disease when left purely to nature; in other words, when not modified by vaccination. It is, indeed, pretty clear that no accumulation of evidence will have any effect on those who are not convinced already by the evidence of Marson and others. What is wanting in these cases is not evidence, but intellectual capacity. We say this in full remembrance of the fact that there are one or two gifted men among the enemies of vaccination. Still they have, to put it mildly, a defect or a peculiarity of brain which is not influenced by evidence. Nevertheless we must solemnly record the evidence as it reaches us from those who, in the faithful and painstaking discharge of the loathsome duties of a smallpox hospital, work it out. Though it will not affect the fanatical, it will satisfy those who have complied with the vaccination laws that they have reason on their side; not only so, but that their great security will be in being thoroughly vaccinated—not in a mere formal compliance with the vaccination acts—but in having arms well marked with vaccination scars.

The first instalment of information supplied by this epidemic reaches us from the

Homerton Fever Hospital, in the form of a report from Dr. Collie, the medical superintendent. He gives the result of 915 cases, from Dec. 8th to May 18th. From this it appears that the unvaccinated died at the rate of 53 per cent., the badly vaccinated at the rate of 26 per cent., the fairly well vaccinated at the rate of 2.3 per cent., and that no death occurred in any person under sixteen years of age who showed two good cicatrices of vaccination, and after sixteen only *two such persons died*. Dr. Collie's report is instructive, too, on another point much overlooked—namely, the troublesome and sometimes fatal complications and results of smallpox. We hear much from anti-vaccinationists of a few pimples that follow vaccination. But what of the things that follow smallpox? In 151 of the 915 cases there were boils; in 18 cases mania followed smallpox, of which 12 proved fatal; in 7 cases the eye was attacked with perforating ulcer, which often leads to blindness; in 24 cases there was inflammation of the windpipe, of which 8 died.—*Lancet*, Sept. 1, 1877.

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Spread of Disease through Laundries.—Though cleanliness is the best safeguard against disease, it is nevertheless an undoubted fact that clean linen is often the medium for propagating smallpox and other similar complaints. Under these circumstances the recklessness and ignorance displayed, not only by common washerwomen, but even by the managers of model laundries, are totally out of keeping with the progress we have achieved in other sanitary matters. The smallest rooms, the most unwholesome back kitchens, still seem good enough for the washing of linen; and the same is dried in passages frequented by the lowest class of persons, and hung between walls on which the dirt of ages has accumulated. The clothes that go nearest to the skin, that are the most likely therefore to introduce through the pores any germs that may fall on them, are thoughtlessly entrusted to a laundress without any inquiry being made as to the suitability of the place where they are to be washed. If they are taken to the suburbs it is simply because rents are cheaper in those districts; but there, as in town, clean and dirty clothes are brought into constant contact, and the washerwoman's family, perhaps also some of her assistants, sleep, eat, sicken, and die, with their customers' linen lying around about them. We have visited innumerable laundries, and what we describe is not the exception but the rule.—*Lancet*, Aug. 18, 1877.

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Deaths from Chloroform.—Two more deaths in consequence of the administration of anæsthetics have occurred during the past week—one at the London Hospital on the 11th inst., and one at the Royal Ophthalmic Hospital, Moorfields, on the 14th inst. That at the London Hospital occurred about midnight. A man applied with an irreducible paraphimosis. After several ineffectual attempts at reduction, which caused the man very great pain, Mr. Hovell, the House-Surgeon, asked one of his colleagues to administer choloroform. A very small quantity was given on a piece of lint. The patient was quickly under its influence. However, in about two minutes, the breathing suddenly ceased, his face became livid, and the pulse failed. Sylvester's method of artificial respiration was at once resorted to, and other measures were adopted, and failed. At the post-mortem examination the heart was found to be flaccid and dilated, and the muscular tissue fatty; it contained a little loose dark clot; there was no valvular disease. No other organic disease. The second death, at Moorfields, befell a woman, aged forty-six; she was extremely fat, and of slow intelligence. She had complained of shortness of breath on exertion, but was not known to be the subject of organic disease. She was to be operated on for senile cataract. A mixture of chloroform and ether, in a modified Clover's apparatus, was being administered by the House-Surgeon. From the commencement of the administration respiration was noticed to be shallow, but there was struggling. The pulse was feeble but not intermittent. There was some slight lividity of cheeks and forehead. Chloroform was at once removed,

and a few whiffs of pure ether administered as a stimulant. Other means for restoring circulation were tried, but in vain; the patient died. At the post-mortem examination the heart was found flaccid and empty; the mitral valve was contracted, and the aortic valves were incompetent. Kidneys were fatty and granular.—*Med. Times and Gaz.*, Aug. 18, 1877.

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Death from Chloroform averted by the Inhalation of Nitrite of Amyl.—The *British Medical Journal* (Aug. 18, 1877) publishes, without giving the author's name, the following interesting communication. On the 9th instant, I was asked by a professional friend to administer chloroform to a patient of his, from whom he was about to remove a fatty tumour, situated in the left lumbar region. The patient in question was about forty-nine years of age, married, the mother of several children, of thin, spare habit, but otherwise in good health. She was nervous, and apprehensive of the result, entreating me not to give her too much chloroform. Having previously examined the heart and found all the sounds normal, I gave her about two teaspoonfuls of brandy undiluted; and after waiting a few minutes, and placing her in the recumbent posture, I commenced the administration. The chloroform I used was Duncan and Flockhart's, upon the purity of which we can always depend. I poured a measured drachm upon a piece of lint, enveloped in a towel. I held it some little distance from her mouth and nose, and let her inhale slowly. My friend noted her pulse, whilst I carefully watched the respiration. The first dose did not produce any effect, and I then used another drachm, which soon caused a good deal of excitement, incoherent talking, and struggling—the patient striving several times to snatch the inhaler from my hand. This gradually subsided, and she appeared to be passing into the third stage of anæsthesia, when she made an abortive effort to vomit, raised her head from the pillow, and, to my friend's great alarm, the pulse flickered and stopped altogether; she gave a gasp; foam gathered on her lips; her jaw became rigid; and to all appearance she was dead. I immediately withdrew the chloroform; my friend dashed some cold water on her face and pulled her tongue forward, whilst I commenced artificial respiration, after Marshal Hall's method, but without success. We then poured some nitrite of amyl on lint, and held it to her nostrils. In such emergencies, it is impossible to judge the flight of time correctly; but I should say in ten seconds there was a flushing of the face, the pulse was again felt, and, to our great joy, the all-important function of respiration was again restored; the woman being rescued apparently from the very article of death. After a time, the anæsthesia seeming tolerably profound, my friend proceeded to remove the tumour, which he did in a rapid and skilful manner, whilst, as the patient grew restless, I gave an occasional whiff of chloroform. It proved to be an ordinary fatty tumour. Only one small vessel required to be ligatured. The wound has since healed rapidly, and the patient has made a good recovery. In looking at the order of symptoms, I cannot help forming the opinion that, had it not been for the nitrite of amyl, this poor patient would assuredly have died. I have never seen, either in surgical or obstetrical practice, any one in such imminent peril. I am thankful to say I have never witnessed a case of death from chloroform; but, from the accounts published in the medical journals, both I and my friend inferred that, in the present instance, there was syncope arising from paralysis of the heart, and that this was met by the nitrite of amyl, which, in accordance with its physiological effects, gave a direct fillip to the arrested circulation.

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Fatal Result from Habitual Use of Chloral.—The peril involved in the habitual use of hydrate of chloral has received another illustration. A gentleman, aged apparently about forty, was found dead one morning, at the Nelson Coffee-house, New-cut, Lambeth, where he had lodged for the last three months. The deceased is said to have been an army surgeon, and to have been subject to sleeplessness, to

remedy which he resorted to the employment of chloral-hydrate. A verdict of "Death by misadventure" was returned at the inquest held on the body.—*Lancet*, Sept. 1, 1877.

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The Diaphanoscope.—Attempts at lighting up the abdominal cavity for the purpose of diagnosis date from 1860. Milliot in 1867 made an instrument, but only used it on animals and dead bodies. His experiments led Lazarewitch to apply it to gynæcology. He, however, failed to get light without at the same time getting heat, and so burning the patient. Dr. Justus Schramm, of Dresden, has overcome this difficulty, and made an instrument which can be used for any length of time. It consists of two glass tubes, the smaller within the larger, round at one end, at the other fixed to a wooden handle (made, for convenience of cleaning, to screw off). In the inner tube lie two copper wires, connected at one end with a galvanic battery, at the other joined by a slip of platinum. In the outer chamber cold water circulates, to absorb the heat given out by the platinum. In the handle is a button, by which the operator can make and break the current at will. The diaphanoscope is used in a dark room. The patient should be on her back, and her thighs extended. The tube is put into the vagina or rectum; the current is made, and the platinum soon gets white hot, giving a brilliant light. Then a wooden ring is pressed down, and at the same time moved about, so as to stretch and bring near to the light successive parts of the abdominal walls. The contrivance can only be used where the abdominal walls are thin, yielding, and not irritable; and there are many morbid conditions, which we need not specify, in which it is plainly inadmissible. Lazarewitch has described appearances seen with his instrument, which, if confirmed by extended observations, would give it a certain diagnostic value. Dr. Schramm, however, in the few trials he has made with his more perfect apparatus, has failed to get results anything like so satisfactory. But his observations are as yet very few; and it is hoped that further experience with it may lead to something better. Meanwhile we agree with Dr. Schramm's wise remark, that an addition to our resources is always to be greeted with thanks. Although he cannot at present tell us that it is of real use, yet by making known his apparatus he may lead others to experiment with it and improve upon it, and so time may bring practical fruits from it.—*Med. Times and Gaz.*, Aug. 18, 1877.

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The Hôtel Dieu, Paris.—The new Hôtel Dieu was officially opened on the 11th of August by Marshal MacMahon. It appears to have cost forty millions of francs and contains only 400 beds.

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Surgeon-in-Ordinary to the Queen in Scotland.—This position, which was vacated by Mr. Lister's removal to London, has been conferred upon Prof. George Macleod, of Glasgow.

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Astley Cooper Prize.—The prize for 1877 has been awarded to the essay bearing the motto, "Facta non Verba," the sealed envelope accompanying which contained the names of Drs. Eulenburg and Gutmann. The subject selected for the next prize is, "The Cranial Nerves, with reference to their anatomy and its relations to surgical diseases and injuries. The essay to be accompanied by preparations and drawings clearly displaying the course and distribution of the nerves, and especially their mutual connections." Essays in competition, written either in the English language, or, if in a foreign language, accompanied by an English translation, must be sent to Guy's Hospital on or before January 1, 1880, addressed to the physicians and surgeons of Guy's Hospital.—*Lancet*, Aug. 18, 1877.

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